

P-024



Police Modifier Bulletin

SVE BULLETIN

SPECIAL VEHICLE ENGINEERING – BODY BUILDERS ADVISORY SERVICE

E-Mail via website: www.fleet.ford.com/truckbbas (click
"Contact Us")

Toll-free: (877) 840-4338

Date: 29 September, 2015

2017 and Beyond Utility Police Interceptor – Rear Spoiler Traffic Advisor Light Bar – Option 96T

Models Affected

2017MY and Beyond Utility Police Interceptor

Purpose

Provide information describing the Rear Spoiler Traffic Advisor Light Bar and setting of LED light colors and flash patterns.

Rear Spoiler Traffic Advisor Light Bar – Option 96T

Table of Contents

<u>DESCRIPTION</u>	<u>PAGE</u>
Rear Spoiler Traffic Advisor Light Bar – Option 96T	1
Table of Contents	1
OPTION CONTENT (Key Components)	3
LED Light Color Features (Directional & Warning)	3
Driver Side LED Traffic Advisor Lamp Assembly	4
Passenger Side LED Traffic Advisor Lamp Assembly	5
Traffic Advisor Maxi – Y Harness	6
Break Out Box (B.O.B.) Assembly & Components	7
Overlay Harness <14A103>	8
BREAK OUT BOX (B.O.B.) JUMPER HARNESS	9
Up-Fitter Blunt Cut (Discrete) Control Wires	9

Table of Contents (continued)

BREAK OUT BOX (B.O.B.) MODULE	10
Overview	10
DIP Switch Settings.....	11
LED Status / Fault Codes (LEDs 1 – 4)	12
LED Status / Fault Code LED 5	13
LED Status / Fault Code LED 6	14
Content (including Connector Pins & Wire Mapping).....	15
Location in Vehicle	16
PROGRAMMING LED COLORS & FLASH PATTERNS.....	17
WITH OEM Option 67H CENCOM Sapphire™ Controller & Software (PKG. 25)	17
Method to Change LED WARNING Colors & Flash Patterns	17
Available LED WARNING Colors & Flash Patterns	18
LED WARNING Button & Control	19
Method to Change LED DIRECTIONAL ARROW Flash (Rear Spoiler)	20
Available LED DIRECTIONAL ARROW Flash Patterns (Rear Spoiler)	21
LED DIRECTIONAL ARROW Button & Control.....	22
WITHOUT OEM Option 67H CENCOM Sapphire™ Up-Fitter Blunt Cut (Discrete) Control Wires.....	23
Method to Change LED WARNING Colors & Flash Patterns	23
Method to Change LED DIRECTIONAL ARROW Flash (Rear Spoiler)	24
Using Blunt Cut (Discrete) Control Wires.....	25
Table of Figures.....	26

**UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T
OPTION CONTENT (Key Components)**

LED Light Color Features (Directional & Warning)

Fig. 1 Directional Arrow Indication — Amber



Fig. 2 Warning Flash — Red/Blue, Red/Red, Blue/Red, or Blue/Blue



Driver Side (RED) / Passenger Side (BLUE)
(Standard combination for this option)

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T
OPTION CONTENT (Key Components)

Driver Side LED Traffic Advisor Lamp Assembly

Fig. 3

Traffic Advisor Lamp Assy LH
Connection to
Maxi-“Y” Harness Driver Side

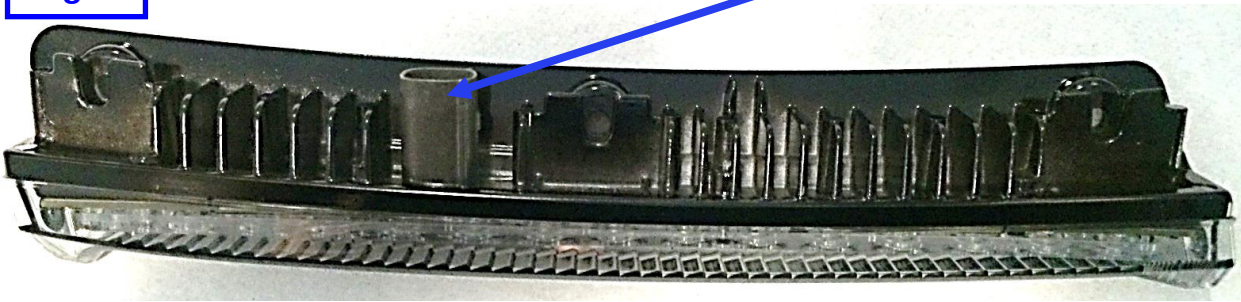


Fig. 4



UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T
OPTION CONTENT (Key Components)

Passenger Side LED Traffic Advisor Lamp Assembly

Fig. 5

Traffic Advisor Lamp Asy RH
Connection to
Maxi-“Y” Harness Passenger Side

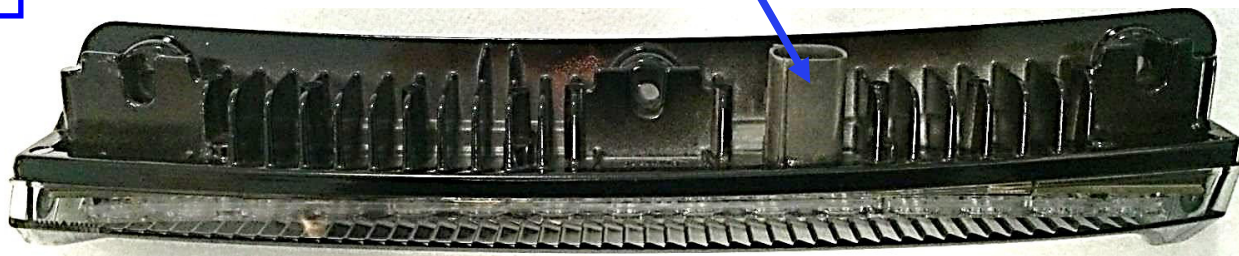


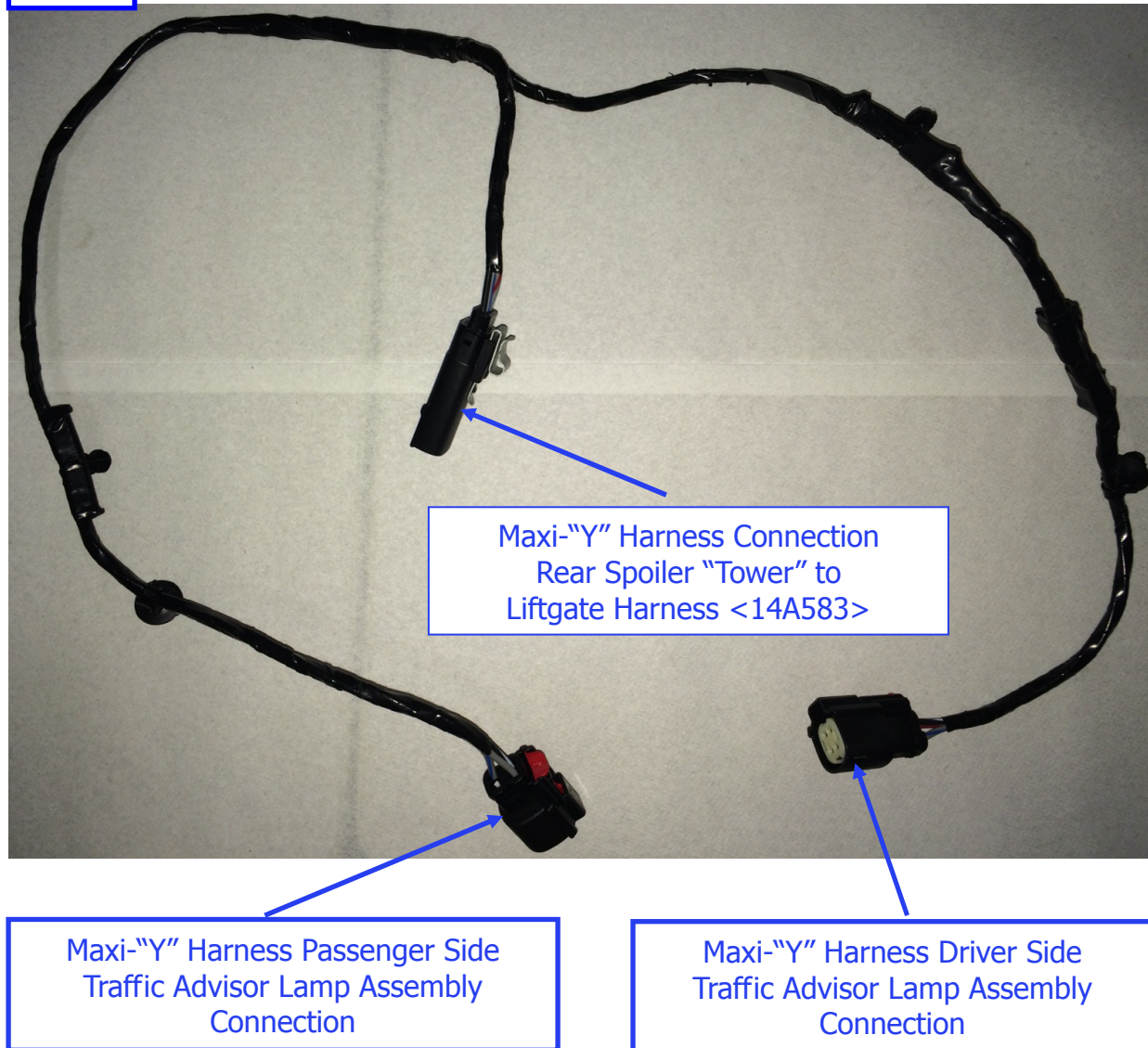
Fig. 6



UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T
OPTION CONTENT (Key Components)

Traffic Advisor Maxi – Y Harness

Fig. 7



UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T OPTION CONTENT (Key Components)

Break Out Box (B.O.B.) Assembly & Components

**Breakout Box (B.O.B.) Module and Jumper Harness
(Common between Front Interior Visor Lights & Rear Traffic Advisor Lights)**

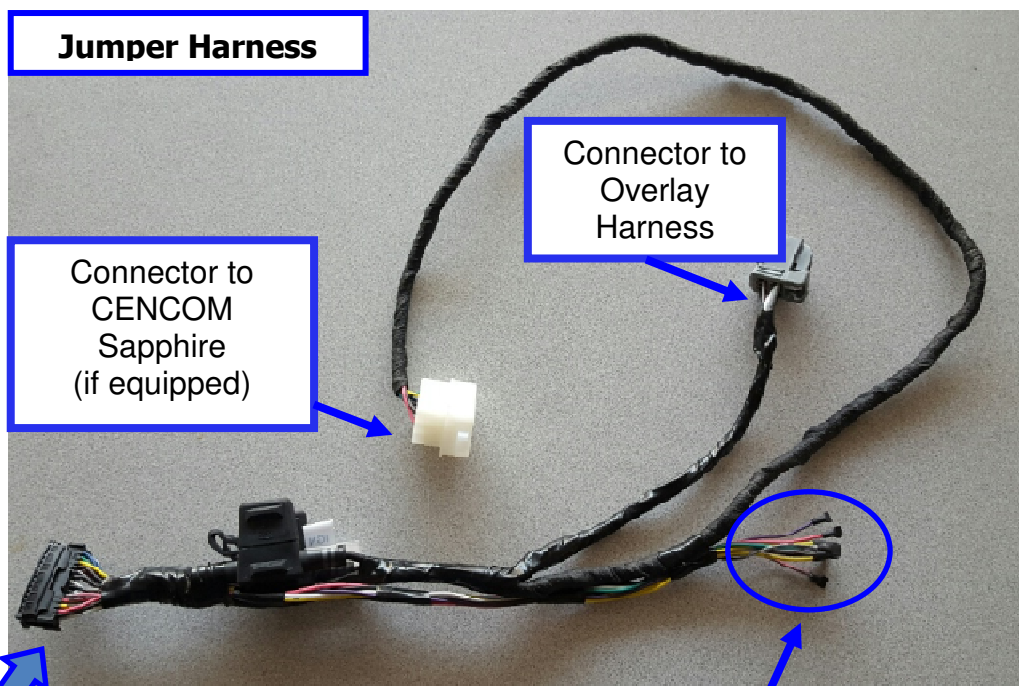
Fig. 8

Jumper Harness

Connector to
Overlay
Harness

Connector to
CENCOM
Sapphire
(if equipped)

**Breakout Box (B.O.B.)
Module**



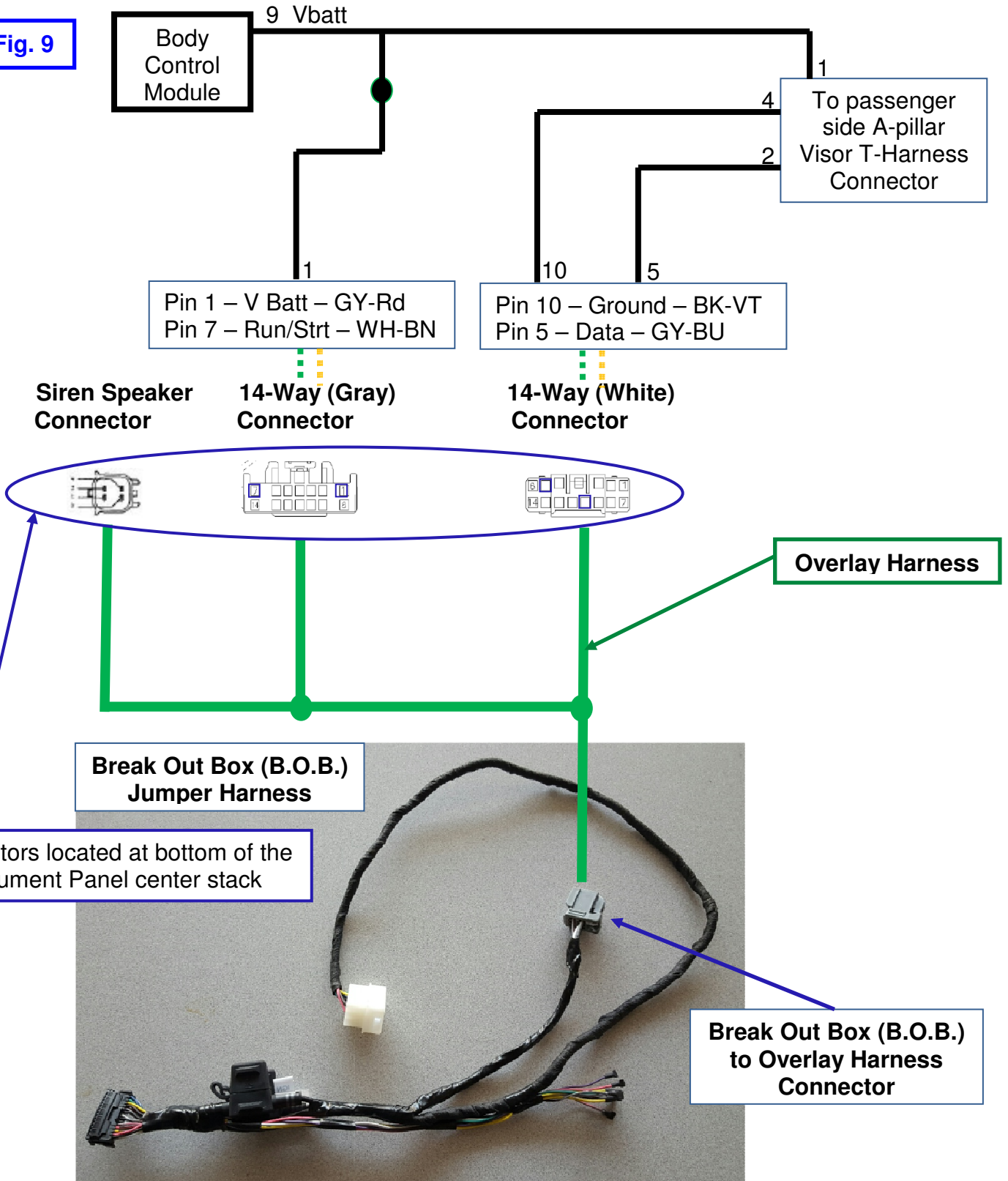
Blunt Cut Control Wires
(without CENCOM)

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T

OPTION CONTENT (Key Components)

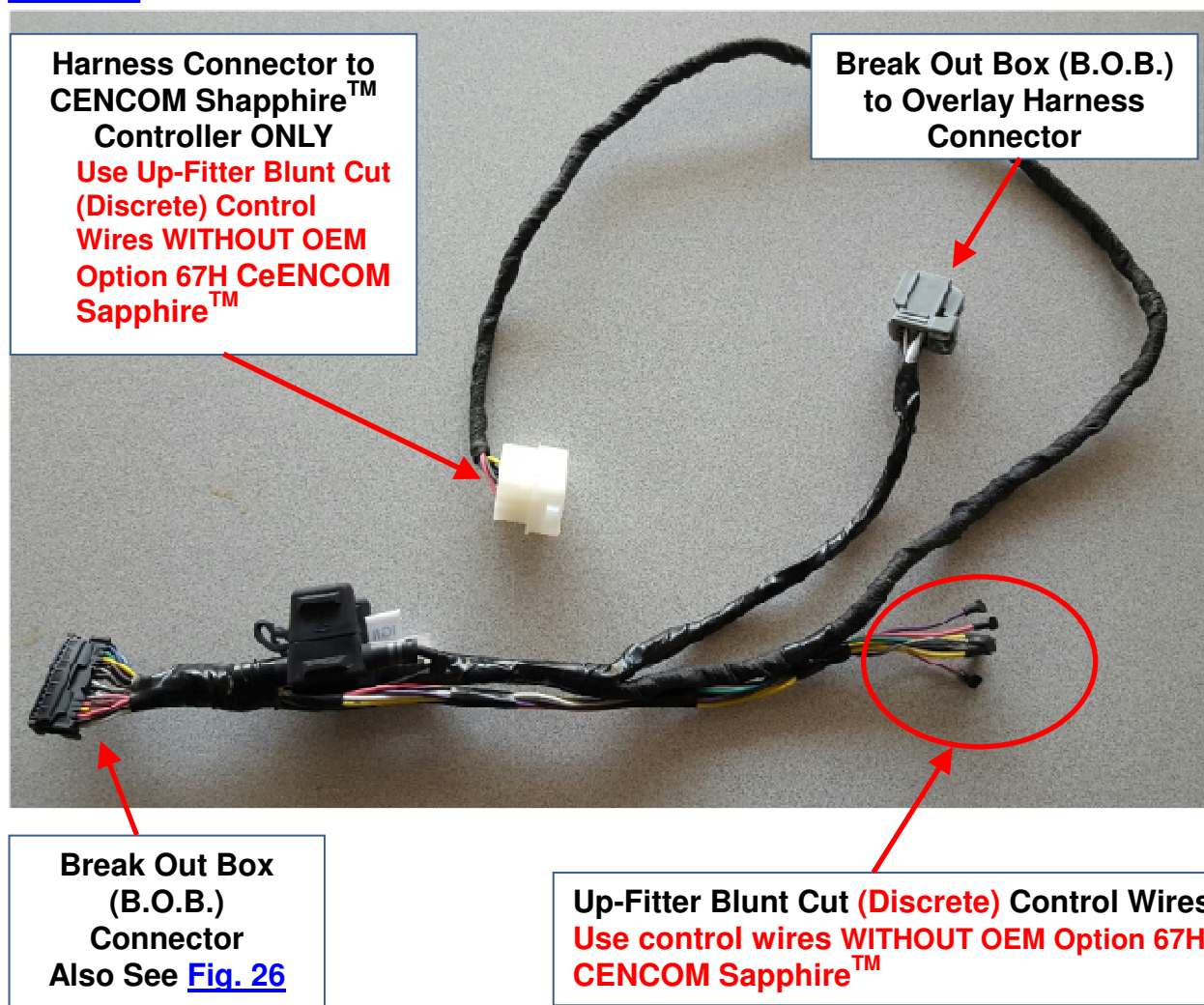
Overlay Harness <14A103>

Fig. 9



UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR
BREAK OUT BOX (B.O.B.) JUMPER HARNESS

Fig. 10



UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR BREAK OUT BOX (B.O.B.) MODULE

Overview

(May also be called Control Module)

Fig. 11



3 DIP switches

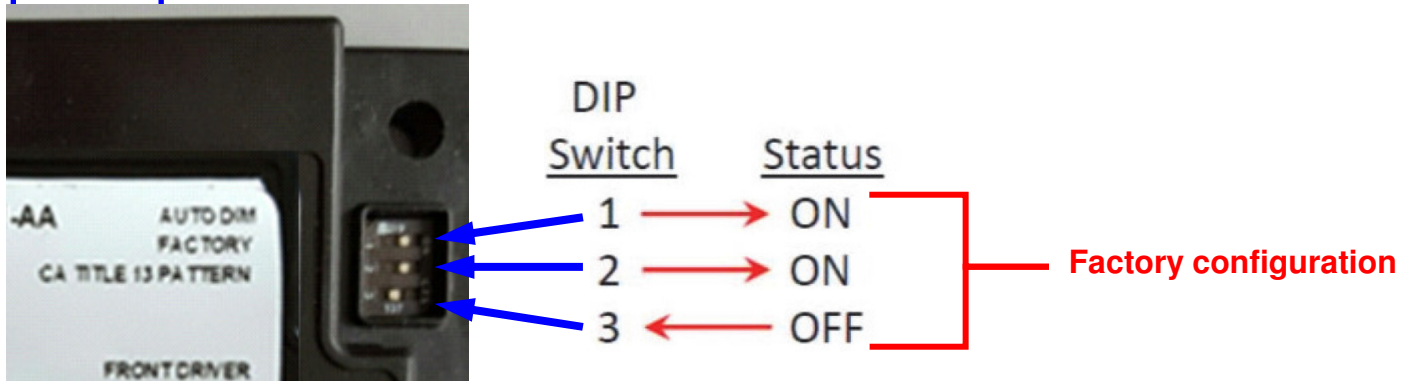
- Auto Dim function
- Factory default patterns
- CA Title 13 flash patterns

LED function / fault code indicator

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR
BREAK OUT BOX (B.O.B.) MODULE

DIP Switch Settings

Fig. 12



Switch #	Function / Status
1	ON = Enable Autodim, OFF – Disable Autodim Factory setting with Autodim switch 1 ON
2	ON = Factory Default Setting, OFF = Custom Settings Allowed Factory setting with switch 2 ON (Module cannot be programmed with DIP Switch in the ON position.)
3	ON = CA Title 13 Pattern Active, OFF = Alternative Pattern Active Factory setting with CA Title 13 switch 3 OFF

Note: Low power can be selected using the discrete wire for testing lights

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR BREAK OUT BOX (B.O.B.) MODULE

LED Status / Fault Codes (LEDs 1 – 4)

Fig. 13



Visor Driver & Passenger (LED's 1 & 2)

Rear Traffic Advisor Driver & Passenger (LED's 3 & 4)

LED Status / Fault Codes for Module LEDs 1 – 4

<u>LED Display</u>	<u>Condition Description</u>
Steady ON	Module connected with no faults
OFF	Module is not connected (communication timeout of 1 second)
1 Wink	LED bank failure
2 Winks	Auto dimming sensor failure
3 Winks	Communication error
4 Winks	Low input voltage failure (below 10.5 volts)

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR BREAK OUT BOX (B.O.B.) MODULE

LED Status / Fault Code LED 5

Fig. 14



Control Module (B.O.B.) (LED 5)

LED Status / Fault Codes for BOB Module LED 5

<u>LED Display</u>	<u>Condition Description</u>
Steady ON	<OK> = Module is powered ON with no internal faults
OFF	Module is not powered ON
1 Wink	LED module LIN line shorted to ground
2 Winks	LED module LIN line shorted to 12 Volts
4 Winks	Low input voltage (below 10.5 Volts)

**UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR
BREAK OUT BOX (B.O.B.) MODULE**

LED Status / Fault Code LED 6

Fig. 15



Rear Traffic Advisor Warning or Arrow (LED 6)

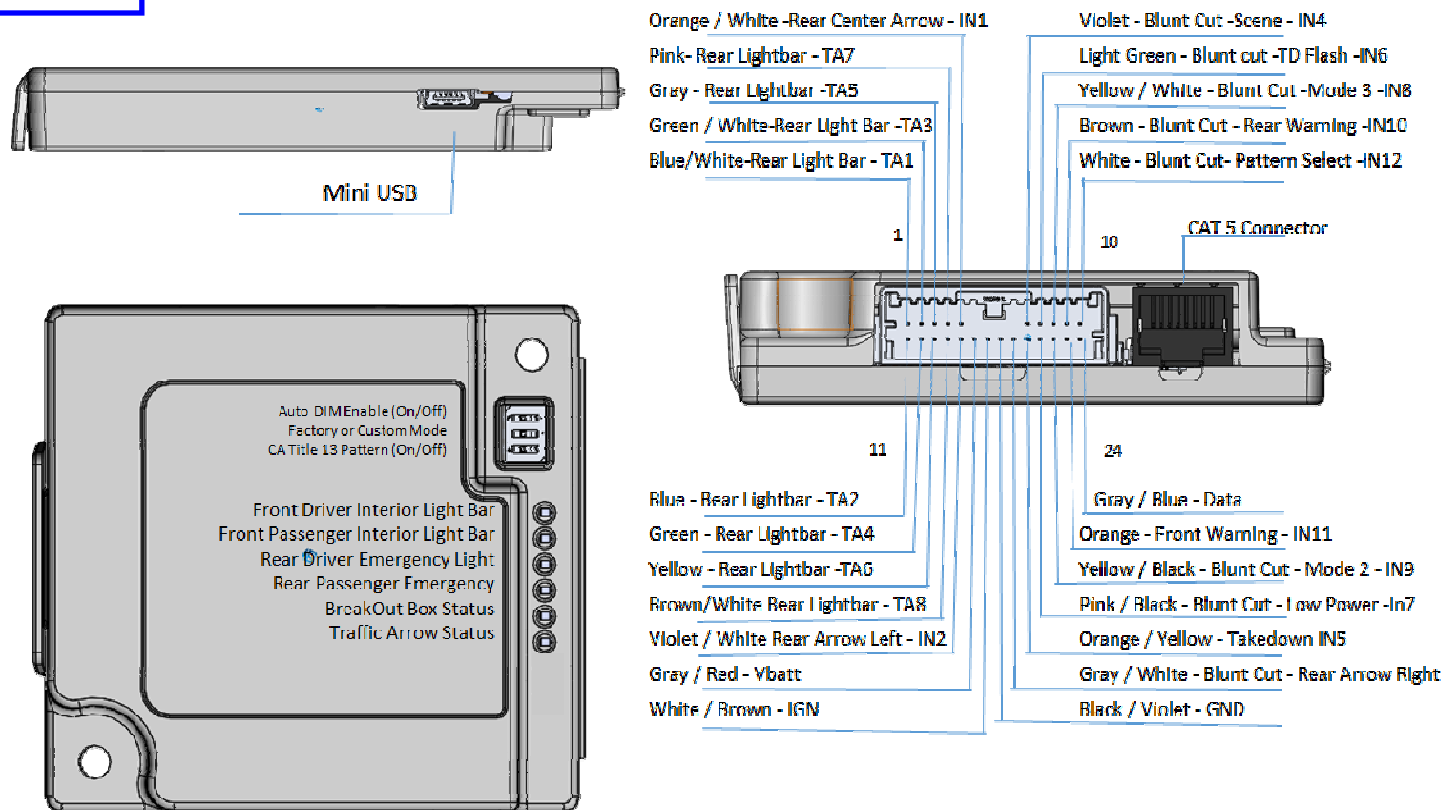
LED Status / Fault Codes for BOB Module LED 6

<u>LED Display</u>	<u>Condition Description</u>
Steady ON	B.O.B. module is decoding a valid flash pattern (Warning or Arrow)
OFF	B.O.B. module is decoding valid data for standby mode (No Flash Pattern active)
1 Wink	B.O.B. module is detecting data, but unable to decode

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR BREAK OUT BOX (B.O.B.) MODULE

Content (including Connector Pins & Wire Mapping)

Fig. 16



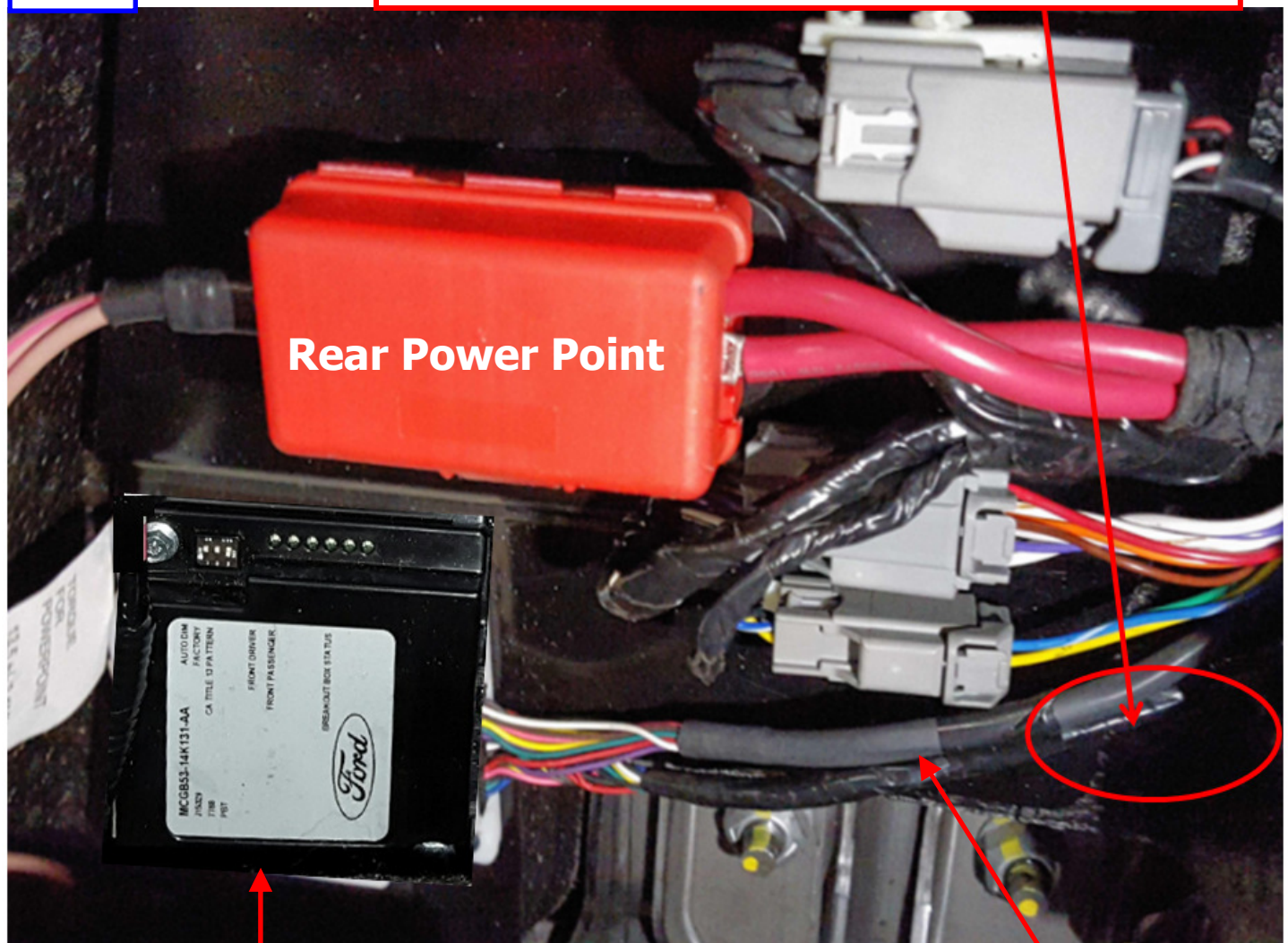
UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR
BREAK OUT BOX (B.O.B.) MODULE

Location in Vehicle

(LOCATION is Near Rear Power Point)

Fig. 17

Up-Fitter Blunt Cut (Discrete) Control Wires



Break Out Box (B.O.B.) Assembly

Break Out Box (B.O.B.)
Jumper Harness

**BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITH OEM Option 67H CENCOM Sapphire™ Controller & Software (PKG. 25)**

Method to Change LED WARNING Colors & Flash Patterns

- 1) Find the **FACTORY DIP Switch [#2]** on the Breakout Box (B.O.B.) Module and move the switch to the OFF position.
- 2) To change the LED WARNING Colors & Flash Patterns, locate the WHITE Up-Fitter Blunt Cut (Discrete) Control Wire.
- 3) Turn ON the Rear Spoiler Traffic Advisor LED WARNING Lights using the CENCOM Sapphire™ Pushbutton Control in Fig. 19.
- 4) Momentarily apply a switched fused 12 volt power source to the WHITE Blunt Cut (Discrete) Control Wire.
- 5) When the LED WARNING Lights turn OFF, then release the 12 volt power from the Blunt Cut (Discrete) Control Wire.
- 6) Repeating Steps 4 & 5 above, cycles through each LED WARNING Color & Flash Pattern in Fig. 18.

NOTES:

- 1) Pattern / Color choices
 - a) Grouped in 5 different patterns per section
 - b) Starting at 1 (Default), progressing through 1 – 5, then 6 – 10 and so on reaching the desired Pattern / Color choice shown in Fig. 18.
- 2) Leave the Factory DIP Switch set to **OFF** to retain the new program setting
 - a) Setting the Factory DIP Switch to ON, reverts the Pattern / Color back to the Factory (Default) setting
- 3) Mode 2 and 3
 - a) Allows user to change WARNING Flash function from one Pattern / Color selection to another by applying 12 volts to the Up-Fitter Blunt Cut (Discrete) Control Wire

BREAKOUT BOX (B.O.B.) MODULE PROGRAMMING LED COLORS & FLASH PATTERNS

Available LED WARNING Colors & Flash Patterns

Fig. 18

Table ID	Colors	ID	Name	Color Driver/Passenger	Flashes / Second	SAE Compliant?	CA Title 13 Compliant?
1*	1	SC1	Random	Red / Blue (default SAE)	1.11 – 3.13	✓	
2	1	SC4	Quad 2	Red / Blue	1.14	✓	
3	1	SC6	Double	Red / Blue	1.92	✓	
4	1	SC7	Power Pulse	Red / Blue	3.13	✓	
5**	1	SC8	Road Runner	Red / Blue (default Title 13)	1.92	✓	✓
6	1	SC1	Random	Red / Red	1.11 – 3.13	✓	
7	1	SC4	Quad 2	Red / Red	1.14	✓	
8	1	SC6	Double	Red / Red	1.92	✓	
9	1	SC7	Power Pulse	Red / Red	3.13	✓	
10	1	SC8	Road Runner	Red / Red	1.92	✓	✓
11	1	SC1	Random	Blue / Blue	1.11 – 3.13	✓	
12	1	SC4	Quad 2	Blue / Blue	1.14	✓	
13	1	SC6	Double	Blue / Blue	1.92	✓	
14	1	SC7	Power Pulse	Blue / Blue	3.13	✓	
15	1	SC8	Road Runner	Blue / Blue	1.92	✓	✓
16	2	DC1	Random	Red-Blue / Red-Blue	1.11 – 3.13	✓	
17	2	DC4	Quad 2	Red-Blue / Red-Blue	1.14	✓	
18	2	DC6	Double	Red-Blue / Red-Blue	1.92	✓	
19	2	DC7	Power Pulse	Red-Blue / Red-Blue	3.13	✓	
20	2	DC8	Road Runner	Red-Blue / Red-Blue	1.92	✓	✓
21	3	TC4	Quad 2	Red-Blue-Amber / Red-Blue- Amber	1.14	✓	
22	3	TC6	Double	Red-Blue- Amber / Red-Blue- Amber	1.92	✓	
23	3	TC7	Power Pulse	Red-Blue- Amber / Red-Blue- Amber	3.13	✓	
24	3	TC8	Road Runner	Red-Blue- Amber / Red-Blue- Amber	1.92	✓	✓

* — Denotes default **SAE** Color & Pattern when B.O.B. [Dip Switch is set to 2](#)

** — Denotes default **Title 13** Color & Pattern when B.O.B. [Dip Switch is set to 3](#)

**BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITH OEM Option 67H CENCOM Sapphire™ Controller & Software (PKG. 25)**

LED WARNING Button & Control

INITIATED BY PRESSING THE BUTTON 3 SEPARATE TIMES:
[1ST REAR FLASH] [2ND REAR FLASH] [3RD REAR FLASH]

Fig. 19

CENCOM Sapphire™ Controller - WARNING Button

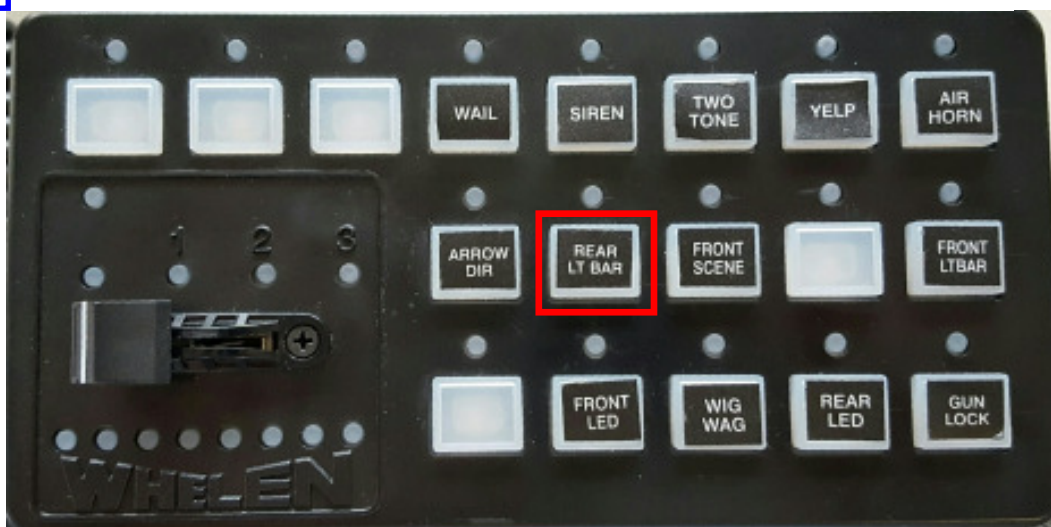
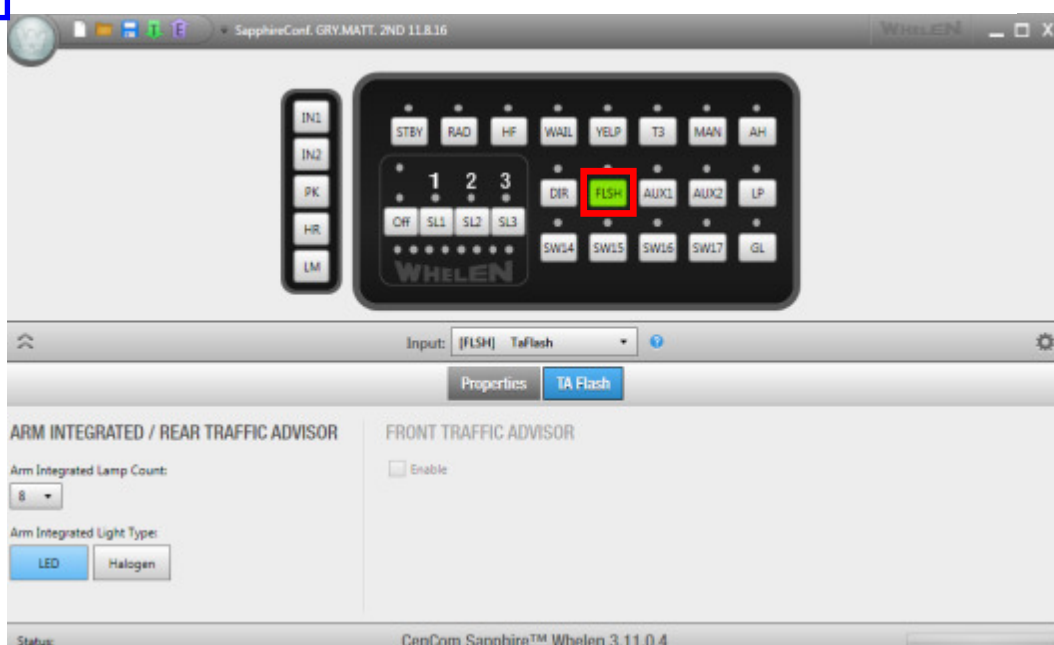


Fig. 20

CENCOM Sapphire™ Software - WARNING Control



**BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITH OEM Option 67H CENCOM Sapphire™ Controller & Software (PKG. 25)**

Method to Change LED DIRECTIONAL ARROW Flash (Rear Spoiler)

The Rear LED DIRECTIONAL ARROW Button operates 3 Flash Patterns each through a separate PRESS of the button shown in [Fig. 22](#). Each PRESS initiates an AMBER progressing pattern as follows: 1st = RIGHT, 2nd = LEFT, & 3rd CENTER OUTWARD.

- 1) Find the **FACTORY DIP Switch [#2]** on the Breakout Box (B.O.B.) Module and move the switch to the OFF position (**module cannot be programmed with switch in ON position**).
- 2) To change the LED DIRECTIONAL ARROW Flash Patterns, locate the WHITE Up-Fitter Blunt Cut (Discrete) Control Wire.
- 3) Turn ON the Rear Spoiler Traffic Advisor LED DIRECTIONAL ARROW Lights using the CenCom Sapphire™ Pushbutton Control in [Fig. 22](#).
- 4) Momentarily apply a switched fused 12 volt power source to the WHITE Blunt Cut (Discrete) Control Wire.
- 5) When the LED DIRECTIONAL ARROW Lights turn off, then release the 12 volt power from the Blunt Cut (Discrete) Control Wire.
- 6) Repeating Steps 4 & 5 above, cycles through each LED DIRECTIONAL ARROW Flash Pattern in [Fig. 21](#).

NOTES:

- 1) Pattern choices (e.g. Single, Chaser, Fill)
 - a) Grouped in 2 different patterns (e.g. Fast, Slow) per section
 - b) Starting at 7 (Default), progressing through 8 – 9, 10 – 11, then back to 1 – 2, 3 – 4 and so on to reach your desired pattern / color in [Fig. 21](#).
- 2) Leave the Factory DIP Switch set to **OFF** to retain the new program setting
 - a) Setting the Factory DIP Switch to ON, reverts the Pattern / Color back to the Factory (Default) setting
- 3) Mode 2 and 3
 - a) Allows user to change WARNING Flash function from one Pattern / Color selection to another by applying 12 volts to the Up-Fitter Blunt Cut (Discrete) Control Wire

**BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS**

Available LED DIRECTIONAL ARROW Flash Patterns (Rear Spoiler)

Fig. 21

Pattern #	Colors	Name	Flashes / Second	SAE Compliant (Y/N)	CA Title 13 Compliant (Y/N)
1	Amber	Single fast (L,R,C)	n/a	n/a	n/a
2	Amber	Single slow (L,R,C)	n/a	n/a	n/a
3	Amber	Chaser fast (L,R,C)	n/a	n/a	n/a
4	Amber	Chaser slow (L,R,C)	n/a	n/a	n/a
5	Amber	Fill Fast (L,R,C)	n/a	n/a	n/a
6	Amber	Fill Slow (L,R,C)	n/a	n/a	n/a
7*	Amber	Grow-Shrink (L,R,C) (Default Arrow pattern)	n/a	n/a	n/a
8	Amber	Warning w/ Arrow (L,R,C)	n/a	n/a	n/a
9	Amber	Warning w/ Arrow Fill (L,R,C)	n/a	n/a	n/a
10	Amber	Arrow Random 1 (L,R,C)	n/a	n/a	n/a
11	Amber	Arrow Random 2 (L,R,C)	n/a	n/a	n/a

* Pattern 7 is default arrow pattern for left, right, and center arrow.

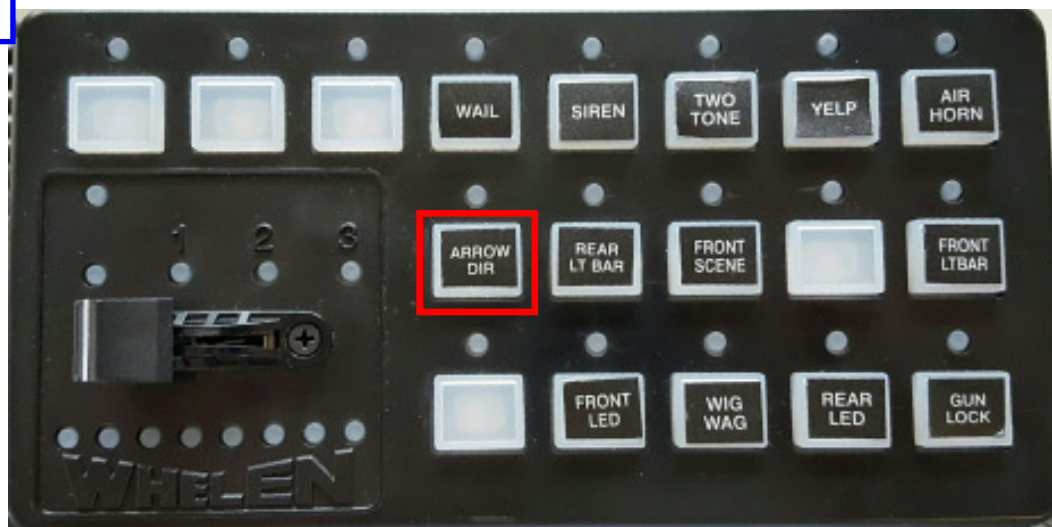
**BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITH OEM Option 67H CENCOM Sapphire™ Controller & Software (PKG. 25)**

LED DIRECTIONAL ARROW Button & Control

INITIATED BY PRESSING THE BUTTON 3 SEPARATE TIMES:
[1ST RIGHT ARROW] [2ND LEFT ARROW] [3RD CENTER ARROW OUTWARD]

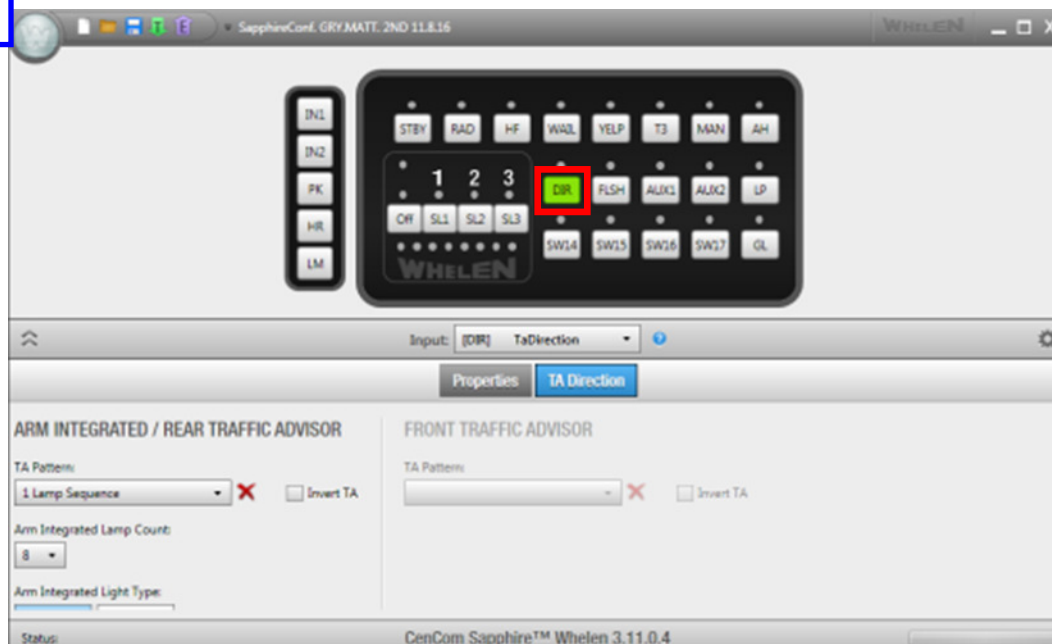
CenCom Sapphire™ Controller – DIRECTIONAL ARROW Button

Fig. 22



CENCOM Sapphire™ Software - DIRECTIONAL ARROW Control

Fig. 23



BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITHOUT OEM Option 67H CENCOM Sapphire™ Up-Fitter Blunt Cut
(Discrete) Control Wires

Method to Change LED WARNING Colors & Flash Patterns

- 1) Find the **FACTORY DIP Switch [#2]** on the Breakout Box (B.O.B.) Module and move the switch to the OFF position (**module cannot be programmed with switch in ON position**).
- 2) To change the LED WARNING Colors & Flash Patterns, locate the WHITE Up-Fitter Blunt Cut (Discrete) Control Wire.
- 3) Turn ON the Rear Spoiler Traffic Advisor LED WARNING.
- 4) Momentarily apply a switched fused 12 volt power source to the WHITE Blunt Cut (Discrete) Control Wire.
- 5) When the LED WARNING Lights turn OFF, then release the 12 volt power from the Blunt Cut (Discrete) Control Wire.
- 6) Repeating Steps 4 & 5 above, cycles through each LED WARNING Color & Flash Pattern in Fig. 18.

NOTES:

- 1) Pattern / Color choices
 - a) Grouped in 5 different patterns per section
 - b) Starting at 1 (Default), progressing through 1 – 5, then 6 – 10 and so on reaching the desired Pattern / Color choice shown in Fig. 18.
- 2) Leave the Factory DIP Switch set to **OFF** to retain the new program setting
 - a) Setting the Factory DIP Switch to ON, reverts the Pattern / Color back to the Factory (Default) setting
- 3) Mode 2 and 3
 - a) Allows user to change WARNING Flash function from one Pattern / Color selection to another by applying 12 volts to the Up-Fitter Blunt Cut (Discrete) Control Wire

BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITHOUT OEM Option 67H CENCOM Sapphire™
Up-Fitter Blunt Cut (**Discrete**) Control Wires

Method to Change LED DIRECTIONAL ARROW Flash (Rear Spoiler)

- 1) Find the **FACTORY DIP Switch [#2]** on the Breakout Box (B.O.B.) Module and move the switch to the OFF position (**module cannot be programmed with switch in ON position**).
- 2) To change the LED DIRECTIONAL ARROW Flash Patterns, locate the WHITE Up-Fitter Blunt Cut (Discrete) Control Wire.
- 3) Turn ON the Rear Spoiler Traffic Advisor LED DIRECTIONAL ARROW Lights.
- 4) Momentarily apply a switched fused 12 volt power source to the WHITE Blunt Cut (Discrete) Control Wire.
- 5) When the LED DIRECTIONAL ARROW Lights turn off, then release the 12 volt power from the Blunt Cut (Discrete) Control Wire.
- 6) Repeating Steps 4 & 5 above, cycles through each LED DIRECTIONAL ARROW Flash Pattern in Fig. 21.

NOTES:

- 1) Pattern choices (e.g. Single, Chaser, Fill)
 - a) Grouped in 2 different patterns (e.g. Fast, Slow) per section
 - b) Starting at 7 (Default), progressing through 8 – 9, 10 – 11, then back to 1 – 2, 3 – 4 and so on to reach your desired pattern / color in Fig. 21.
- 2) Leave the Factory DIP Switch set to **OFF** to retain the new program setting
 - a) Setting the Factory DIP Switch to ON, reverts the Pattern / Color back to the Factory (Default) setting
- 3) Mode 2 and 3
 - a) Allows user to change WARNING Flash function from one Pattern / Color selection to another by applying 12 volts to the Up-Fitter Blunt Cut (Discrete) Control Wire

BREAKOUT BOX (B.O.B.) MODULE
PROGRAMMING LED COLORS & FLASH PATTERNS
WITHOUT OEM Option 67H CENCOM Sapphire™
Up-Fitter Blunt Cut (Discrete) Control Wires

Using Blunt Cut (Discrete) Control Wires

Blunt Cut (Discrete) Wires control each of the functions:

- Left Arrow
- Right Arrow
- Low Power
- Warning 1, 2, 3

Fig. 24

Blunt Cut (Discrete) Control Wires & Connector Definitions

FUNCTION			
Description	Signal	Pin #	Wire Color
Pattern Select	IN12	10	WH (White)
Rear Warning	IN10	9	BN (Brown)
Rear Arrow Right	IN3	19	GY (Gray) – WH (White)
Rear Arrow Left	IN2	15	VT (Violet) – WH (White)
Rear Arrow Center	IN1	5	OR (Orange) – WH (White)
Mode 3	IN8	8	YE (Yellow) – WH (White)
Mode 2	IN9	22	YE (Yellow) – BK (Black)
Low Power	IN7	21	PK (Pink) – BK (Black)

NOTE: Discrete Low Power wire always allowed regardless of [Autodim setting/state](#)

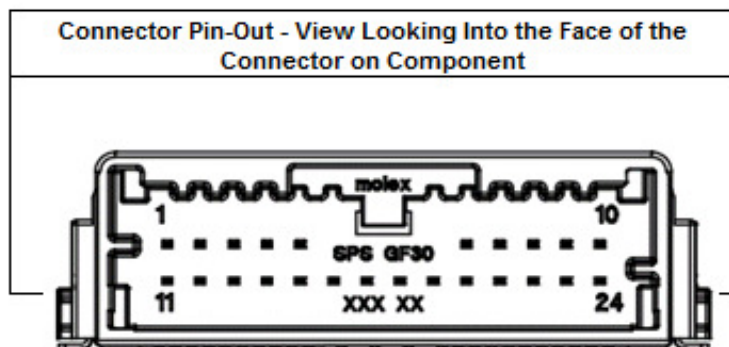


Fig. 25

Break Out Box (B.O.B.) Connector

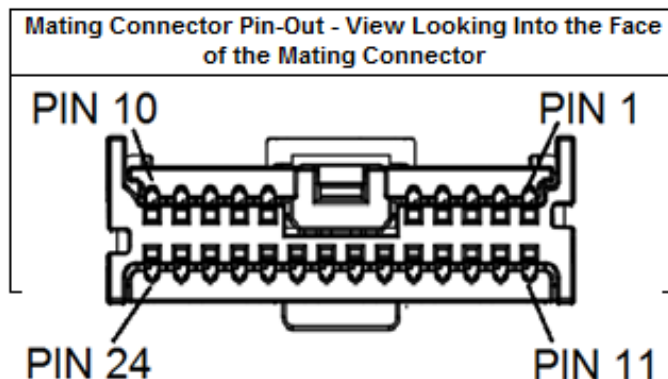


Fig. 26

Jumper Harness Connector

UTILITY INTERCEPTOR REAR SPOILER TRAFFIC ADVISOR LIGHT BAR – OPTION 96T

Table of Figures

<u>ID No.</u>	<u>DESCRIPTION</u>	<u>PAGES</u>
Fig. 1	Directional Arrow Indication — Amber.....	3
Fig. 2	Warning Flash — Red/Blue, Red/Red, Blue/Red, or Blue/Blue	3
Fig. 3	Driver Side LED – Top View.....	4
Fig. 4	Driver Side LED – Lens View	4
Fig. 5	Passenger Side LED – Top View	5
Fig. 6	Passenger Side LED – Lens View	5
Fig. 7	Traffic Advisor Maxi – Y Harness Connections	6
Fig. 8	Breakout Box (B.O.B.) Assembly	7
Fig. 9	Overlay Harness <14A103>	8
Fig. 10	Break Out Box (B.O.B.) Jumper Harness.....	9
Fig. 11	Break Out Box (B.O.B.) Module - Overview	10
Fig. 12	Break Out Box (B.O.B.) Module - DIP Switch Settings.....	11
Fig. 13	Break Out Box (B.O.B.) Module - LED Status / Fault Codes for LEDs 1 – 4.....	12
Fig. 14	Break Out Box (B.O.B.) Module - LED Status / Fault Codes for LED 5	13
Fig. 15	Break Out Box (B.O.B.) Module - LED Status / Fault Codes for LED 6	14
Fig. 16	Break Out Box (B.O.B.) Module Content (inc. Connector Pins & Wire Mapping).....	15
Fig. 17	Break Out Box (B.O.B.) Module – Location in Vehicle	16
Fig. 18	Programming — Available LED WARNING Colors & Flash Patterns	18
Fig. 20	CENCOM Sapphire™ Software - WARNING Control	19
Fig. 19	CENCOM Sapphire™ Controller - WARNING Button	19
Fig. 21	Programming — Available LED ARROW Flash Patterns (Rear Spoiler).....	21
Fig. 22	CENCOM Sapphire™ Controller – DIRECTIONAL ARROW Button.....	22
Fig. 23	CENCOM Sapphire™ Software - DIRECTIONAL ARROW Control.....	22
Fig. 24	Blunt Cut (Discrete) Control Wires & Connector Definitions.....	25
Fig. 25	Break Out Box (B.O.B.) Connector	25
Fig. 26	Jumper Harness Connector	25